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An Unusual Case of Tricuspid Valve Infective Endocarditis in A Non iv Drug Abuser

Medical Science

KEYWORDS :

Dr ANUSHA A RAO JUNIOR RESIDENT, K S HEGDE MEDICAL ACADEMY, MANGALORE

DR IVOR D'SA PROFESSOR, K S HEGDE MEDICAL ACADEMY

ABSTRACT

Endocarditis of right heart valves is unusual with more than 80% of Tricuspid valve endocarditis occurring in drug addicts. We report a case of an 18-year-old male who presented with fever of 2 weeks duration following a deep lacerated wound of the left foot. Patient also complained of chest discomfort and easy fatigability. On examination, a non healing ulcer in the medial aspect of left foot, marfanoid habitus was present along with Grade 4/6 Pansysytolic murmur in mitral area. ECHO showed Mitral valve prolapse-Anterior Mitral Leaflet prolapse, mild mitral regurgitation, mild tricuspid regurgitation with suspicion of vegetation in the atrial side of tricuspid valve. Transesophageal echocardiography confirmed the vegetation. However, blood cultures (3 samples) and pus culture showed no growth, probably because the patient had been taking oral antibiotics. The diagnosis of Marfan syndrome was confirmed considering the following criteria: pectus excavatum, high arched palate, arm span / height = 1.069, Upper segment/ lower segment = 0.68 and mitral valve prolapse with mitral regurgitation. Patient was treated with I.V Antibiotics for 4 weeks. On follow up, echo showed resolving vegetation with a trivial tricuspid regurgitation. We conclude that tricuspid valve endocarditis should be considered in patients with persistent fever during the course of treatment of extra cardiac septic focus.

INTRODUCTION

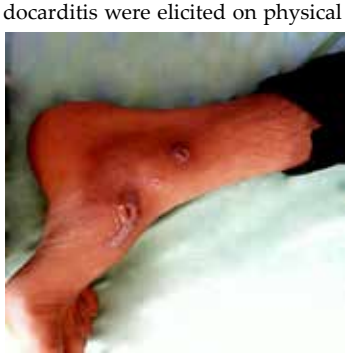
Endocarditis of right heart valves is unusual with more than 80% of Tricuspid valve endocarditis occurring in drug addicts. The remainders are young patients with majority having underlying debilitating conditions such as alcoholism, abortion, colonic disease, permanent catheter, and extra cardiac septic foci. ''Tricuspid Syndrome'' (Persistent fever associated with pulmonary events, anemia, and microscopic hematuria) is the classical presentation of tricuspid valve endocarditis. [1] Pulmonary manifestations predominate the clinical picture and peripheral stigmata are uncommon.

CASE REPORT

An 18 year old boy, presented to the hospital with persistent fever of 2 weeks duration following deep injury of the left foot sustained at a road traffic accident. . He also complained of easy fatigability and chest discomfort. He had taken oral antibiotics for the same at a local hospital.

On examination, the patient was febrile and with a heart rate of 104 beats per minute, regular in rhythm and character, a supine blood pressure of 110/70mmHg with no postural drop, respiratory rate of 25 breaths/min. Marfanoid Habitus was noted. Patient had a high arched palate, with crowding of teeth, arm span / height = 1.069, Upper segment/ lower segment = 0.68, and a pectus excavatum.

Local examination of the left foot had a non healing lacerated wound in the anterio-medial aspect of foot, with a serosanguinous discharge. No other stigmata of infective endocarditis were elicited on physical examination.



Cardiovascular examination showed a grade 4/6 pan systolic murmur, in the mitral area, best heard in sitting position, with the diaphragm of the stethoscope with the patient leaning forwards, which increases on expiration, exercise and change in of posture.

Laboratory investigations revealed normal blood counts, renal functions. Blood cultures and pus culture showed no growth probably because the patient had already taken a course of antibiotics. ECG was within normal limits. However, ECHO showed a mild Mitral Valve Prolapse (MVP) - AML prolapse , Mild MR, mild TR with Suspicion of vegetation on the on the atrial side of Anterior tricuspid leaflet. Transoesophgeal echocardiography confirmed the vegetation.

He was treated with fluid hydration, intravenous Ceftriaxone - salbactam and Intravenous amikacin. On follow up, after 4 weeeks, Echocardiography revealed a persistent Mitral valve prolapsed, mild mitral regurgitation, a resolving tricuspid vegetation and trivial tricuspid regurgitation.

DISCUSSION

Infective endocarditis (IE) involves the aortic and mitral valve most commonly. Infection localized to right heart valves occurs in about 5% -10% of all cases of infective endocarditis. [2] Isolated right-sided endocarditis should be included in the differential diagnosis of patients with febrile syndrome, respiratory symptoms and predisposing disease, even when they do not have a pacemaker and are not IVDU. The presence of intravascular catheters and Staphylococcus bacteriemia should heighten suspicion of TVE. The diagnosis is often delayed because the cardiac manifestation of the disease is subtle, and the murmur of tricuspid regurgitation is rarely present at initial presentation. Symptoms related to pulmonary septic emboli usually

dominate the clinical picture and sometimes joint, muscle, or skin may dominate the clinical picture making diagnosis more difficult. [1]

Blood cultures are negative in up to 20% of patients with infective endocarditis which may be due to inadequate microbiological techniques, infection with highly fastidious bacteria or nonbacterial pathogens, or previous administration of antimicrobial agents before blood cultures. The antimicrobial susceptibility of the organism and the duration and nature of previous antimicrobial therapy together determine the length of time that blood cultures will remain negative. [4]

As in any case of IE, modified Duke Criteria is the gold standard for diagnosis of native Tricuspid valve endocarditis. However, Culture negativity is known to occur in right sided infective endocarditis and in these patients echocardiography has diagnostic value

Prognosis is excellent with intravenous bactericidal antibiotics which may need extension beyond six weeks. Selection of the most appropriate medical therapy for patients with culture negative endocarditis is difficult. There is a need to provide empiric antimicrobials for all likely pathogens and should include consideration of epidemiological features and clinical course of infection. Only about 25% patients require surgery. Major indications of surgery are persistent sepsis despite appropriate antibiotic, recurrent pulmonary embolism and severe right heart failure. Surgical options include vegetectomy and valvulectomy, valve repair, and valve replacement. Mortality is about 14%-24% which is lower than described for IE in patients with predisposing conditions.

CONCLUSION

We conclude that tricuspid valve endocarditis should be considered in patients with persistent fever during the course of treatment of extra cardiac septic focus.

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